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*Big Data and Analytics in the Enterprise*

*With HR analytics, human resources professionals and senior managers can analyze data to inform hiring strategies, highlight business opportunities and forge the best career paths for top performers.*

## An Introduction to Human Resources Analytics

*By Cindy Waxer*

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The practice of human resources analytics dates as far back as 1984 when Jac Fitzend, author and president of HR services organization Saratoga Institute, published *How to Measure Human Resources Management*, a seminal tome outlining the metrics that can be used to effectively measure employee performance. Since then, HR analytics has evolved from an experimental approach to managing human capital to a must-have set of strategic tools for improving employee satisfaction, boosting retention rates, calculating compensation, forecasting workforce deficiencies and flagging star performers for special attention.

HR analytics works by gathering workforce data, from work history to employee satisfaction scores, and feeding this information into advanced computer models. Using sophisticated algorithms, these models churn out insights that HR leaders can use to make critical decisions, such as whether to tweak commission structures to drive sales or invest more heavily in training to curb high attrition rates.



↑ HR executives are looking to analytics to help them make an impact in the boardroom.

Corporate executives are fast jumping on the HR analytics bandwagon and for good reason. HR analytics marks a new frontier: No longer are senior managers responsible for making workforce changes based on hunches and past history. Rather, HR leaders can analyze data to inform hiring strategies, highlight business opportunities and forge the best career paths for top performers.

“HR is very eager to take advantage of the ability to forecast talent demand, gauge talent supply, predict retention and to anticipate HR-related outcomes,” says Elizabeth Craig, a research fellow with Accenture Institute for High Performance.

Technology providers are eager to help, too. In August 2012, IBM bought talent management software provider Kenexa for a whopping \$1.3 billion. SAP (with SuccessFactors) and Oracle (with Taleo) also made acquisitions to enter this field while smaller players like Visier and Evolv gain ground with highly scalable, cloud-based tools. Taken as a whole, HR analytics is an expanding field: Researchers from Bersin & Associates project that the global market for integrated talent management technologies will grow 22 percent to nearly \$4 billion this year—almost double the growth rate of 12 percent in 2011-2012.

## Benefits and Use Cases

Making the most of HR analytics requires connecting HR data with a company’s strategic objectives. Today’s HR leaders “face pressure to demonstrate the ROI” of an HR analytics system, according to Wendy Hirsh, a principal at the HR consulting firm Mercer. Fortunately, Hirsch says, “analyzing data so that it helps the company make the right business decisions” is a step in the right direction.

The right direction depends on the enterprise’s specific circumstances. For example, a Silicon Valley start-up that’s having a tough time retaining tech-savvy talent may use HR analytics to better anticipate employee turnover and provide incentives to curb attrition. A sales-driven agency, on the other hand, is more likely to examine their data to differentiate a high sales performer from an under-achiever.

HR leaders that successfully match data elements to their human capital needs in a way that can impact decision making can expect a number of key benefits:

**Reduce attrition.** By identifying top employees that are about to leave the company in the nick of time, or sweetening the compensation pot for Baby Boomers considering early retirement, an HR analytics application, effectively deployed, can save a company millions of dollars in lost talent. Factors such as location, pay scale and personality type can all be fed into an HR analytics system to preserve the best people in a talent pool. Consider, for example, The Results Companies based in Dania Beach, Fla. Using Evolv’s

workforce-analytics solution, the business-process-outsourcing company has been able to improve its hiring practices, thereby reducing attrition rates by nearly 35 percent in less than two years. That's a savings of hundreds of dollars per employee.

**Anticipate performance.** Unfortunately, no amount of glowing references or impressive credentials can truly predict a candidate's on-the-job performance. HR analytics can address this gap by identifying workers with strong leadership qualities and flagging those that are unlikely to mesh with a company's corporate culture. By better matching job applicants to the right positions, The Results Companies enhanced performance rates by 20 percent and boosted revenue per agent by 4 percent.

**Compensation efficiency.** Although most commonly a tool used by sales managers, HR leaders can also take advantage of today's sales analytics applications—software that can compare and select from a variety of sales compensation models before putting them into production. For example, a company may have a compensation structure that rewards the acquisition of new accounts by granting salespeople a 10 percent cut of the account's estimated worth. However, through analytics, it may be discovered that rewarding top performers with a predetermined annual bonus is a more cost-effective tactic for driving sales and stoking competition among sales reps. Such questions are important: according to a 2011 study from Compensation Analytics, 70 percent of respondents identified improving compensation design processes as a top priority.

**Enhance employee morale.** It can cost upwards of \$10,000 in recruiting and training costs to replace a single \$8 per hour employee, according to The Sasha Corporation, a Cincinnati-based consultancy. Analytics tools can gauge signs of dissatisfaction and point to ways for retaining individual workers, boosting employee morale. Career-development planning, connecting high performers with training programs, gathering information from employee surveys—they are all ways HR analytics tools can measure an employee's satisfaction and willingness to stay on board.

## Challenges to Making Analytics Work

As with any analytics implementation, the promise of these HR systems depends on an enterprise's ability to employ the right people, business processes and tools to make them effective. Among the challenges:

**Finding the right talent to run HR analytics.** According to Craig, finding people with the right blend of HR knowledge and analytics training can be like looking for a needle in a haystack. "They have these highly specialized skills that are scarce in the labor market—almost esoteric," she says. "As a result, the HR leaders who are hiring and retaining them often don't understand what data scientists do and that creates a real challenge for managing and leading the workforce." Although many HR leaders are

equipped to oversee an analytics system, some tools require skills in data modelling, computer science, statistics and math.

**A lack of confidence doesn't exactly help matters.** Only 6 percent of worldwide HR teams feel they are “experts” on the use of analytics in talent management, according to a report from Bersin & Associates. And only 20 percent believe that the data they capture now is highly credible and reliable for decision-making in their own organization.


**Currying executive support.** Convincing higher-ups that it's time to invest in yet another HR system can be a tough sell. For years vendors have been pitching HR leaders on everything from time and attendance systems and employee self-service tools to performance management modules and enterprise resource planning systems. To build a strong business case for analytics, HR leaders need to measure beyond employees' past performance and begin to gather crucial data about workers' personalities, motivations, career aspirations, morale and cultural fit—information that feeds into the capabilities of the newer analytics systems and that can lead to a stronger ROI.

**Data deluge.** In a February 2013 blog posting, online survey software provider SurveyMonkey reported that it created about 25 terabytes of data over the past year on behalf of customers who gather information ranging from employee satisfaction to personality traits. An inability to parse this data properly can easily result in a data dump—a bloated repository of information that fails to deliver any real value to an HR team.

**Cost considerations.** There's no shortage of analytics tools to choose from. What might surprise some, however, is that costs can vary wildly. An HR analytics platform alone can range from \$400,000 to \$1.5 million for a company with 5,000 full-time employees. Then there's the cost of hiring talent with specialized skills to run the system: top-tier analytics professionals can demand salaries of \$100,000 or more. And training HR leaders on how to use an analytics tool can amount to \$5,000 per employee. Selecting a cloud-based option can lower costs but either way, HR leaders must be prepared at budget time.

**Data quality.** Because HR tends to store data in sprawling silos across an entire organization, it's easy for bytes and bits to get dropped along the way, or just plain ignored. Out-of-date employee records can also enter the mix, handicapping analysts with less-than-accurate information. Only by establishing best practices for migrating, collecting and analyzing data can HR leaders truly extract valuable business insights.

## Analyzing Data to Anticipate Future Needs

More than simply measuring performance and identifying prime candidates, human resources analytics is fast becoming an HR team's crystal ball—a powerful predictive tool that can help anticipate performance levels, end poorly designed compensation models before they're rolled out and flag potential risks like disgruntled workers. By doing so, HR analytics is certain to become an increasingly indispensable tool for attracting, retaining and optimizing talent. 

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